

## Claims

- [1] 1. An apparatus for inputting English alphabets using a reduced keypad, characterized by comprising:  
a keypad having five buttons of one central button, a left top button, a left bottom button, a right top button and a right bottom button arranged at each vertex of a square shape and around the central button;  
a means for sequentially receiving signals input by operating the buttons on the keypad and creating the signals as a button input signal sequence;  
a means for storing an alphabet list having alphabet sequences consisting of sequential sequences of button input signals and English alphabet representation data, wherein one alphabet representation is associated with at least one alphabet sequence; and  
an alphabet search and display means for searching the alphabet list and displaying a corresponding alphabet representation, using the button input signal sequence whenever one button input signal is received.
- [2] 2. The apparatus as claimed in claim 1, characterized in that each alphabet sequence in the alphabet list consists of input signals by means of the one or more buttons arranged on the keypad, and the buttons for the alphabet sequence is arranged to be similar pattern to writing shape of the associated alphabet representation.
- [3] 3. The apparatus as claimed in claim 1, wherein two adjacent signals of the button input signals consisting of the alphabet sequence are generated by one or two adjacent buttons on the keypad.
- [4] 4. The apparatus as claimed in any of claims 1 to 3, wherein the central button is further allocated functions of start and release of the English alphabet input mode, and switching between the English small and capital alphabet input modes.
- [5] 5. The apparatus as claimed in claim 1, wherein the keypad is produced by varying a part of a 3×4 numeric keypad and the central button is further arranged at the center of adjacent four buttons on the numeric keypad.
- [6] 6. The apparatus as claimed in claim 1, wherein the keypad is configured using No.1, 3, 5, 7 and 9 buttons on the 3×4 numeric keypad.
- [7] 7. A method of inputting English alphabets, using a small keypad comprising five buttons of one central button, a left top button, a left bottom button, a right

top button and a right bottom button arranged at each vertex of a square shape and around the central button, characterized by comprising the steps of:  
receiving each button input signal generated by operating each button on the keypad;  
creating a button input signal sequence to which a currently input button input signal is added when one button input signal is received;  
searching an alphabet list having alphabet sequences consisting of sequential sequences of button input signals and English alphabet representations associated with at least one alphabet sequence, respectively, for a matched alphabet representation using the button input signal sequence; and  
displaying the matched alphabet representation if the matched alphabet representation exists, then receiving a next button input signal and repeating said creating, searching and displaying steps.

- [8] 8. The method as claimed in claim 7, wherein each alphabet sequence in the alphabet list consists of input signals by means of the one or more buttons arranged on the keypad, and the buttons for the alphabet sequence is arranged to be similar pattern to a writing shape of an associated alphabet representation.
- [9] 9. The method as claimed in claim 7, wherein two adjacent signals of the button input signals consisted of the alphabet sequence are generated by one or two adjacent buttons on the keypad.
- [10] 10. A method of inputting alphabets, using button input signal sequences, by searching an alphabet list stored in advance and having alphabet sequences consisting of a series of button input signals and alphabet representations associated with the alphabet sequences and thus by displaying the alphabet representations depending on the button input signal sequences sequentially input, characterized by comprising the steps of:  
a first wait step of waiting a button input signal;  
adding the received button input signal and creating a button input sequence;  
searching the alphabet list using the button input signal sequence;  
a preliminary alphabet extraction step of displaying an alphabet representation associated with an alphabet sequence when there is the alphabet sequence corresponding to the button input signal sequence in the search step, and returning to the first wait step;  
a second wait step of deciding if there is an alphabet sequence having a series of button input signals corresponding to the button input signal sequence as a part if

there is no alphabet sequence corresponding to the button input signal sequence in the search step, and then returning to the first wait step if there is an alphabet sequence having such a part;

an incorrect input correction step of deciding if there was the preliminary alphabet extraction step after the search step when a button input signal was previously received if there is no alphabet sequence having the part, ignoring all the button input signals of the button input signal sequence received up to now if there was no preliminary alphabet extraction step and then returning to the first wait step; and

a determined alphabet extraction step of, if there was, extracting and displaying the preliminary-extracted alphabet representation as a determined alphabet, creating again a button input signal sequence having only the currently received button input signal and then returning to the search step.

- [11] 11. The method as claimed in claim 10, wherein each alphabet sequence in the alphabet list consists of input signals by means of the one or more buttons arranged on the keypad, and the buttons for the alphabet sequence is arranged to be similar pattern to writing shape of the associated alphabet representation.
- [12] 12. The method as claimed in claim 10, wherein two adjacent signals of the button input signals consisted of the alphabet sequence are generated by one or two adjacent buttons on the keypad.
- [13] 13. The method as claimed in claim 10, wherein the incorrect input correction step further comprises the step of generating sound for notifying an incorrect input.
- [14] 14. The method as claimed in claim 10, wherein the button input signal is input by means of a keypad having five buttons of one central button, a left top button, a left bottom button, a right top button and a right bottom button arranged at each vertex of a square shape and around the central button.
- [15] 15. The method as claimed in claim 14, wherein the keypad is produced by varying a part of a 3×4 numeric keypad and the central button is further arranged at the center of four adjacent buttons on the numeric keypad.
- [16] 16. The method as claimed in claim 14, wherein the keypad is configured using No. 1, 3, 5, 7 and 9 buttons among the 3×4 numeric keypad.
- [17] 17. A computer-readable recording medium, on which a software program having program instructions implemented to execute the steps as claimed in any of claims 7 to 16 by a microprocessor is recorded.

- [18] 18. An apparatus for inputting English alphabets using a small keypad, as claimed in claim 1, wherein the keypad is implemented in software to be displayed on a touch screen.
- [19] 19. The apparatus as claimed in claim 18, wherein the keypad is translucently implemented.